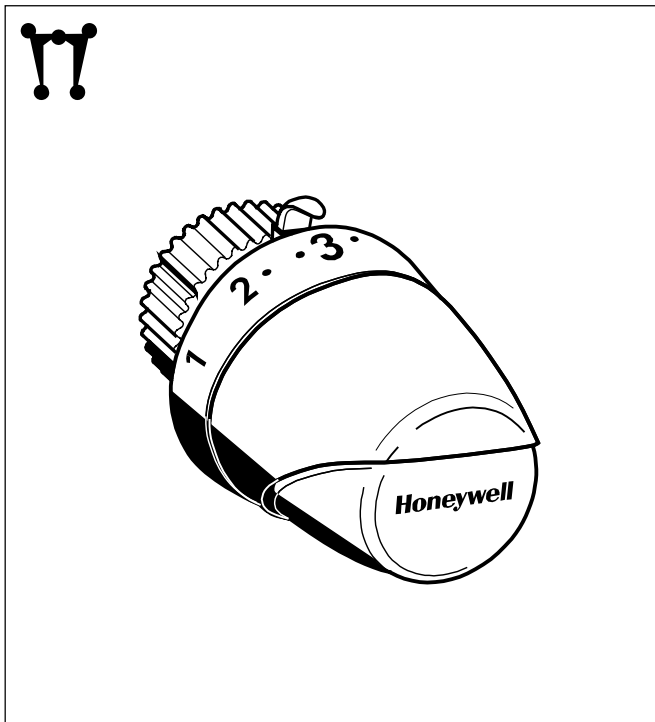


## T2000 Series Thera-4 Design

### RADIATOR THERMOSTATS IN COMPACT SIZE

#### PRODUCT DATA



#### Design

The radiator thermostat consists of:

- Handwheel with lid and socket
- Sensor with support cage
- Spindle assembly
- Connection nut

#### Materials

- Handwheel, lid and socket made of plastic, white to RAL9016
- Support cage and spindle construction made of plastic
- Sensor filled with liquid
- Connection nut made of brass, nickel-plated – for M30x1,5 connection
- Connection nut made of plastic, white to RAL 9016 – for DA version

#### Application

Thermostats are installed onto thermostatic valve bodies (TRV bodies). The combination of thermostat and TRV body, (TRV), controls the room temperature by regulating the flow of heating water into a heat exchanger.

TRVs are installed in water-based heating systems at the supply or, less commonly at the return connection of radiators or other heat exchangers.

Thera-4 Design type thermostats conform to the European Standard EN215 when used with Honeywell TRV bodies according to table 2 on page 3.

**Thera-4 Design with M30 x 1,5 connection** are suitable for all Honeywell TRV bodies and radiator inserts as well as other TRV bodies and radiator inserts with M30 x 1,5 connection and 11,5 mm closing dimension.

**Thera-4 Design-DA with Danfoss snap connection** are suitable for TRV bodies and valve inserts with a Danfoss RA type compatible snap connection.

#### Features

- **Thera-4 Design with M30 x 1.5 connection conforms to European standard EN215**
- **With liquid sensing element**
- **Modern design**
- **Compact size**
- **Easy to clean**
- **Easy to use range stops**

#### Specifications

<b>Thermostat connection</b>	<ul style="list-style-type: none"> <li>• M30 x 1,5</li> <li>• Danfoss snap connection</li> </ul>
<b>Setpoint range</b>	<ul style="list-style-type: none"> <li>• 0 - ❄ - 1..5 (with zero-position)</li> <li>• ❄ - 1..5 (without zero-position)</li> </ul>
<b>Temperature range</b>	<p>With zero-position ('0'):</p> <p>1...28°C (34...82°F)</p> <p>Without zero-position:</p> <p>6...28°C (43...82°F)</p>
<b>Closing dimension</b>	11,5 mm (Thera-4 Design)

NOTE: Zero-position is also thermostatically controlled – when temperature falls the TRV may open.



## Ordering Information

Item	Zero-position ('0')	Connection	Colour	Cap	OS-No.
<b><i>Thera-4 Design, Thera-4 Design-DA with internal sensor</i></b>					
Liquid-filled sensing element		M30 x 1,5	white / white	Honeywell	T2001
	•	M30 x 1,5	white / white	Honeywell	T2001W0
		DA snap connection	white / white	Honeywell	T2001DA
	•	DA snap connection	white / white	Honeywell	T2001DAW0
		M30 x 1,5	white / chrome	Honeywell	T2021
	•	M30 x 1,5	white / chrome	Honeywell	T2021W0
		DA snap connection	white / chrome	Honeywell	T2021DA
	•	DA snap connection	white / chrome	Honeywell	T2021DAW0
		M30 x 1,5	chrome / chrome	Honeywell	T2221
	•	M30 x 1,5	chrome / chrome	Honeywell	T2221W0
		DA snap connection	chrome / chrome	Honeywell	T2221DA
	•	DA snap connection	chrome / chrome	Honeywell	T2221DAW0

## EN215 Information

OS-Nos. T2001, T2001W0, T2021, T2021W0, T2221 and T2221W0 type Thera-4 Design thermostats in connection with below TRV bodies (marked •) conform to the European Standard EN215. The highlighted boxes identify available body patterns of one certain valve type.

	<b>Thera-4 Design</b>	<b>EN 215 requirements</b>
<b>Min. setpoint temperature</b>	6°C (43°F)	5...12°C (41...54°F)
<b>Max. setpoint temperature</b>	28°C (82°F)	≤ 32°C (90°F)
<b>Hysteresis</b>	≤ 0,3K	≤ 1,0K
<b>Influence of differential pressure</b>	0,1...0,5K	≤ 1,0K
<b>Influence of static pressure</b>	0,4K	≤ 1,0K
<b>Influence of heating medium</b>	1K	≤ 1,5K
<b>Response time</b>	30 min.	≤ 40 min.

NOTE: Influence of differential pressure depends on used TRV body.

**Table 2. Comparison of Thera-4 Design specs and EN 215 requirements**

Valve type	Angle to DIN	Straight to DIN	Angle to NF	Straight to NF	Compact angle	Compact straight	Horizontal angle	Corner angle	Swanneck	Other	Angle (re-turn)	Straight (return)
BB	•	•	•	•	•	•						
KV <sub>3</sub>												
KV <sub>4</sub>												
KV <sub>5</sub>	•	•	•	•								
UBG	•	•	•	•								
GB										•		
SL	•	•	•	•								
V	•	•	•	•	•	•						
FV	•	•	•	•	•	•						
SC												
H												

**Table 3. EN 215 cross reference**

## Setpoint

THERA-4 Design type thermostats with zero-position ('0')

Setpoint	0	*	1	2	3	4	5
°C	1	6	14	18	21	24	28
°F	34	43	57	64	70	75	82

NOTE: All °C and °F-values approximate.

NOTE: Heating can freeze when thermostats with zero-position are set at position '0'.

NOTE: Zero-position is also thermostatically controlled – when temperature falls the TRV may open.

THERA-4 Design type thermostats without zero-position ('0')

Setpoint		*	1	2	3	4	5
°C		6	14	18	21	24	28
°F		43	57	64	70	75	82

## Installation Examples

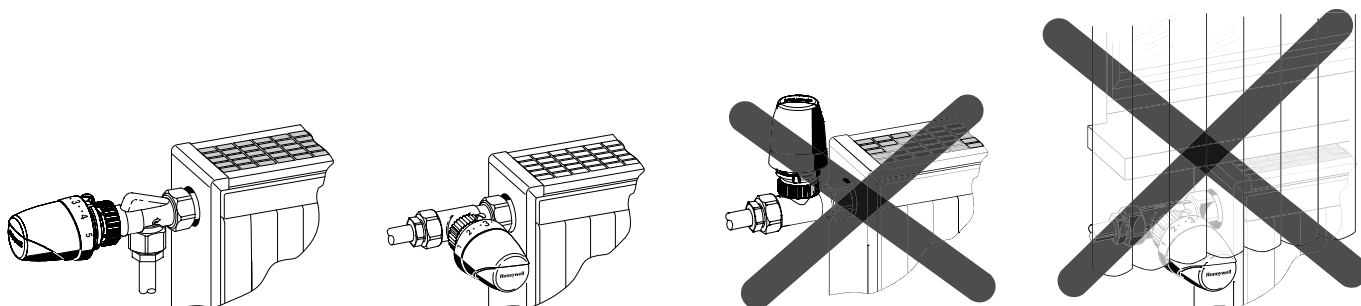


Fig. 3. Installation of THERA-4 Design with internal sensor

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